## II. RESPONSE

### A. Status of the Claims

In response to the Restriction Requirement dated February 24, 2003, Applicants elected Group I, which included claims 1-43. In this Amendment, Applicants cancel claims 26-31, amend claim 6 to correct a clerical error related to claim dependency, and add claims 68-74. Support for the amendment and added claims can be found in the originally filed claims. Thus, no new matter is being added. The claim amendment is show in Appendix A and the pending claims are provided for the Examiner's convenience in Appendix B.

### B. Species Election

In response to the Office Communication in which the Examiner requires several election of species, Applicants elect, without traverse, the following species.

1) For a disease: angiogenesis-dependent cancer, which is readable on elected claims 1-4, 7-24, 32-43, and 68-74;

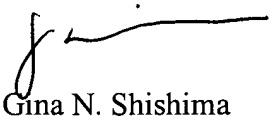
2) For an MDA-7 polypeptide: an MDA-7 polypeptide comprising amino acids 182 to 206 of SEQ ID NO:2, which is readable on elected claims 1-24, 32-43, and 68-74; and,

3) For an expression vector: adenoviral vector, which is readable on elected claims 1-24, 32-43, and 68-74.

Based on the elected invention, claims 1-43, an election of species with respect to an antigen is not relevant to the pending claims.

The Examiner is invited to contact the undersigned attorney at (512) 536-3081 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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**APPENDIX A:**

**Claim Amendment Shown**

6. (Amended once) The method of claim 3, [2] wherein the ocular angiogenic disease is further defined as diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, or Rubeosis.

**APPENDIX B:**

**Claims under Consideration after Response to Office Communication Dated 6/3/03**

1. A method of inhibiting angiogenesis in a patient in need of such treatment comprising administering to the patient a human MDA-7 polypeptide or a nucleic acid expressing the human MDA-7 polypeptide in eukaryotic cells, whereby the MDA-7 polypeptide inhibits angiogenesis in the patient.

2. The method of claim 1, wherein said patient exhibits an angiogenesis-related disease.

3. The method of claim 2, wherein the angiogenesis-related disease is further defined as angiogenesis-dependent cancer, a benign tumor, rheumatoid arthritis, psoriasis, an ocular angiogenic disease, Osler-Webber Syndrome, myocardial angiogenesis, plaque neovascularization, a telangiectasia, hemophiliac joint, angiofibroma, wound granulation, cat scratch disease, an ulcer, an intestinal adhesion, atherosclerosis, scleroderma, or a hypertrophic scar.

4. The method of claim 3, wherein angiogenesis-dependent cancer is further defined as a solid tumor, leukemia, or a tumor metastasis.

5. The method of claim 3, wherein the benign tumor is further defined as a hemangioma, a neuroma, a neurofibroma, a trachoma, uterine fibroid, hamartoma, teratoma, or a pyogenic granuloma.

6. The method of claim 3, wherein the ocular angiogenic disease is further defined as diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, or Rubeosis.

7. The method of claim 1, wherein the nucleic acid is an expression vector.

8. The method of claim 7, wherein the expression vector is a viral vector.

9. The method of claim 8, wherein the viral vector is administered at between $10^3$ and $10^{13}$ pfu.

10. The method of claim 8, wherein said viral vector is an adenoviral vector, a retroviral vector, a vaccinia viral vector, an adeno-associated viral vector, a polyoma viral vector, or a herpesviral vector.

11. The method of claim 8, wherein said viral vector is an adenoviral vector.

12. The method of claim 1, wherein said nucleic acid further comprises a CMV IE, dectin-1, dectin-2, human CD11c, F4/80, SM22 or MHC class II promoter.

13. The method of claim 1, wherein the MDA-7 polypeptide or nucleic acid is administered to the patient by direct injection into an area in need of inhibition of angiogenesis.

14. The method of claim 13, wherein the patient is administered multiple injections.

15. The method of claim 13, wherein the injection is performed locally to a disease site.

16. The method of claim 13, wherein the injection is performed regionally to a disease site.

17. The method of claim 13, wherein the injection is performed distally to a disease site.

18. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered to the patient by continuous infusion.

19. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered to the patient by intravenous injection.

20. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered prior to or after surgery.

21. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered before chemotherapy, immunotherapy, or radiotherapy.

22. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered during chemotherapy, immunotherapy, or radiotherapy.

23. The method of claim 1, wherein the MDA polypeptide or the nucleic acid is administered after chemotherapy, immunotherapy, or radiotherapy.

24. The method of claim 1, wherein the patient is a human.

32. The method of claim 1, wherein the MDA polypeptide comprises amino acids from 182 to 206 of SEQ ID NO:2.

33. The method of claim 1, wherein the MDA polypeptide comprises a secretory signal.

34. The method of claim 33, wherein the secretory signal is further defined as a positively charged N-terminal region in combination with a hydrophobic core.

35. The method of claim 1, wherein the patient is a cancer patient.

36. A method of inhibiting endothelial cell differentiation in a patient comprising administering to the patient an effective amount of a human MDA-7 polypeptide or a nucleic acid molecule expressing the human MDA-7 polypeptide.

37. The method of claim 36, wherein a chemotherapeutic agent is administered prior to administration of the MDA-7 polypeptide or the nucleic acid molecule.

38. The method of claim 36 wherein a chemotherapeutic agent is administered after administration of the MDA-7 polypeptide or the nucleic acid molecule.

39. The method of claim 36, wherein the chemotherapeutic agent is a DNA damaging agent.

40. The method of claim 39, wherein the DNA damaging agent is gamma-irradiation, X-rays, UV-irradiation, microwaves, electronic emissions, adriamycin, 5-fluorouracil (5FU), etoposide (VP-16), camptothecin, actinomycin-D, mitomycin C, cisplatin (CDDP), or hydrogen peroxide.

41. The method of claim 38, wherein the chemotherapeutic agent is a cisplatin (CDDP), carboplatin, procarbazine, mechlorethamine, cyclophosphamide, camptothecin, ifosfamide, melphalan, chlorambucil, bisulfan, nitrosurea, dactinomycin, daunorubicin, doxorubicin, bleomycin, plicomycin, mitomycin, etoposide (VP16), tamoxifen, taxol, transplatinum, 5-fluorouracil, vincristin, vinblastin, methotrexate, or analog or derivative variant thereof.

42. The method of claim 36, wherein the nucleic acid is comprised within a viral vector.

43. The method of claim 36, wherein the nucleic acid is comprised in a lipid composition.

68. The method of claim 32, wherein the MDA polypeptide comprises amino acids from 175 to 206 of SEQ ID NO:2.

69. The method of claim 68, wherein the MDA polypeptide comprises amino acids from 150 to 206 of SEQ ID NO:2.

70. The method of claim 69, wherein the MDA polypeptide conprises amino acids from 125 to 206 of SEQ ID NO:2.

71. The method of claim 70, wherein the MDA polypeptide comprises amino acids from about 100 to about 206 of SEQ ID NO:2.

72. The method of claim 71, wherein the MDA polypeptide comprises amino acids from 75 to 206 of SEQ ID NO:1.

73. The method of claim 72, wherein the MDA polypeptide comprises amino acids from 49 to 206 of SEQ ID NO:2.

74. The method of claim 73, wherein the MDA polypeptide comprises amino acids from 1 to 206 of SEQ ID NO:2.